

THE MANUFACTURE OF MARBLEIZED SLATE MANTELS.

The manufacture and use of marbleized slate for many purposes—the most important of which is for mantel pieces—has reached such a magnitude as to warrant description at our hands, even were the process less interesting to note.

We have accordingly availed ourselves of the courtesy of one of the leading houses in this line, in obtaining information on the subject, from personal inspection of the works and the work there going on.

The material chosen for ornamentation, in imitation of fancy marbles, is slate, which has the advantage of low cost, ease of sawing and working, and fine grain. The slate used at these works comes from Vermont by vessel, and is landed on the wharf of the works.

It is in slabs, about an inch thick, roughed to the sizes and shapes most used. The outlines are cut with a band saw. Marble is inferior for "marbleizing," because of its cost and its coarser grain; the grain of slate running in planes parallel with the flat surfaces, while marble is open and porous, and requires more coats of pigment. Rubbing and smoothing are performed on a horizontal cast iron wheel, about 10 ft. in diameter, running 57 revolutions a minute. For marble, coarse grit sand is used, for slate a very fine grit.

The wheel at the works in question has been worn down from 2½ inches, to less than ½ in. in thickness. After smoothing, any channels that are to be made are cut with a rotary diamond cutter, the bit being hollow and rotating about 5,000 times per minute; a stream of water passing through it preventing injury to the diamonds.

The channel in a "half front" is cut in about three minutes; by hand, it would take one man an hour. The arm carrying the bit is heavily weighted, to ease the operator and cause greater steadiness of cut. Channels having acute angles, or sunken bevells, must be cut by hand, as must some irregular designs. The inner curve of the front is worked to a true line, if a fire-board is to be set in, otherwise, the frame of the heater will cover any trifling irregularity. The slab being worked to the required outline and surface, is now ready for marbleizing. The "ground" is mineral color, ground in copal varnish, because this is a quick dryer. The ground is generally black or brown. When dry, it is ready for the veining or pattern. Upon the surface of a tank of water, various colors mixed in oil are spread in peculiar characteristic patterns, these varying according as the color is ground, dropped, or sprinkled on, and stirred, fanned or otherwise mingled and interangled. The colors do not blend. A slab being dipped edgewise in the water, is brought up so that the variegated film adheres to its surface, making the "marble pattern."

The marbleized slabs are put in a steam kiln and kept at from 185° to 210° F. for 12 hours, baking the colors thoroughly. They are next coated with copal varnish, and again kiln-dried; then rubbed down with pumice-stone powder, again varnished and dried, and then rubbed with the finest polishing powder, and then with the hand; when they have a high, rich lustre, and are ready to be shipped or to be put together by clamps, &c., in place. There are about nine "standard" marbles which are imitated; about six or seven occasionally selected, and about six or eight odd patterns very rarely called for. Mexican onyx has, as yet, baffled all imitative skill.

Where there are "panels" to represent various marbles on one slab, they are separated by cut lines, which are either filled with gold size, or otherwise used to act as boundaries. The veining of one stone should not appear continuous in an adjacent panel representing another kind of stone; this is a common fault, and is in part remedied by leaving a wide unveined band or channel between the panels. Where there is a small veined panel, or a series of such, on a plain black ground, the panels are first colored by dipping or hand work, and the surrounding surface is colored with a brush.

If the general surface is veined, the panels are first made, and then covered with paper, the whole slab is then dipped, and the panels are protected by paper. We should mention that an expert "dipper" will prepare the films and dip 400 square feet of slate (about 150 slabs) in five hours.

[Some fine specimens of imitation marble can be seen at the private office of the Editor, 539½ Craig Street.]

QUICKLY DRYING GLUE.—Put your glue into a bottle two-thirds full, up with common whiskey, cork tightly, and set it by for two or three days; it will dissolve without the application of heat, and will keep for years.

The following United States Patents were granted to Canadians during the months of January and February last:

- N. Loverin, Montreal, Que., January 1, 1878, No. 198,749, Apparatus for Teaching History.
- H. F. Howell, Sarnia, Ont., January 1, 1878, No. 198,767, Roasting Ores.
- E. A. Bradley, Ottawa, Ont., January 1, 1878, No. 198,869, Camp Bedstead.
- W. D. Webster, St. Catherines, Ont., January 1, 1878, No. 198,910, Hand Hoe.
- W. Drum, St. Mary's, Ont., January 8, 1878, No. 198,972, Car Coupling.
- G. Goodwin, Cookshire, Que., January 8, 1878, No. 199,054, Tanning Leather.
- G. Bisset, Jr., Quebec, Que., January 15, 1878, No. 199,179, Collapsible Cores for Casting.
- B. F. Baltzby, Montreal, Que., January 22, 1878, No. 199,491, Photographic Plate Holder.
- J. Blakeley, Toronto, Ont., January 29, 1878, No. 199,618, Car Axle Box.
- G. Brown, Montreal, Que., January 29, 1878, No. 199,616, Metal Cans.
- J. Kinney, London, Ont., January 29, 1878, No. 199,651, Iron Fences.
- W. T. Aikins, Toronto, Ont., February 5, 1878, No. 200,012, Grease-arresters for Sinks.
- S. Horsford, Halifax, N. S., February 5, 1878, No. 199,906, Skates.
- E. R. Whitney, Magog, Que., February 5, 1878, No. 200,114, Harvester Cutter Bars.
- H. W. Searle, Hamilton, Ont., February 12, 1878, No. 200,152, Snow Shovels.
- L. Durand, Quebec, Que., February 12, 1878, No. 200,183, Dough Kneading Machines.
- E. B. Beer, Sussex, N.B., February 19, 1878, No. 200,426, Target.
- J. Foley, Montreal, Que., February 26, 1878, No. 200,608, Water Filters.
- T. Walsh, Montreal, Que., February 26, 1878, No. 200,676, Water Meters.
- J. Dewe, Ottawa, Ont., February 26, 1878, No. 200,702, Postage Stamps.

A SOLUTION of cyanid of potassium is the best poison to kill insects of any kind.

A CORD of stone, 3 bushels of lime, and a cubic yard of sand will lay 100 cubic feet of wall.

FRENCH FURNITURE POLISH.—Take 5½ pounds of shellac, 3½ pounds of resin, and also 3½ pounds of turpentine, 1 pound of lampblack, 3 gallons of alcohol, and ¼ a gallon of linseed oil. Melt the gums in the oil by gentle heat, let the mixture get cool, and then add the other ingredients. It should be allowed to stand two or three weeks before using.

PAPER LACE.—The perfection in machinery, and the novelties introduced thereby, find illustration in a recent occurrence at Berlin. A lady purchased for some relatives two silk ties, with lace borders, which were generally admired, until it was discovered that one of the ties was bordered with real lace and the other by paper lace of similar pattern.

PIVOT TEETH IN DENTISTRY.—Among the best of the inventions in the way of pivoting is a device of Dr. Bonwill's. The root being cut down, the pulp-canal is reamed out greatly in excess of the size of the pivot that is to occupy it. A pivot made of platinum wire, upon which a screw is cut, is next fitted into the canal and firmly packed into place through the use of amalgam. When this amalgam is set, the teeth—the pivot hole running through it—is placed upon the pivot, and is screwed solidly into place by means of a delicate nut, made of gold. It will be understood, of course, that the fitting of the tooth in position has been done at the time of setting the pivot into the root. This operation, when well accomplished, holds a pivot tooth so firmly in place that it may be used with the utmost freedom in mastication.—*Scientific American.*